CEVI
Centre for Energy and Value Issues

Energy and Value Letter

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INTRODUCING THE SECOND ENERGY AND VALUE LETTER

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The Energy and Value Letter is picking up its role in bringing together academics and practitioners worldwide to discuss timely valuation issues in the energy sector. It publishes news from the Centre for Energy and Value Issues (CEVI), its linked organisations and others (including calls for papers), practitioners' papers: short articles from institutions, firms, consultants, etcetera, as well as academic papers: short articles on theoretical, qualitative or modelling issues, empirical results and the like.

Contributions dealing with developed as well as developing countries are published. Specific topics will refer to energy finance in a broad sense. Most of the publications are on invitation. Nevertheless, the journal welcomes unsolicited contributions. Please e-mail to **energyandvalue@gmail.com**, c/o Özgür Arslan, a copy of a news item or a completed paper. Do include the affiliation, address, phone, and e-mail of each author together with appropriate JEL classifications with your contribution. A news item should not have more than 400 words and a paper should not exceed 3.000 words.

The activities of CEVI are not only related to this newsletter. Book publications containing research chapters on global and regional energy and value issues are advanced in their planning and of course the planning for the third international conference on Energy and Value in 2011 has commenced, following the successes of the previous conferences in Amsterdam (2007) and Istanbul (2009). More details on these activities will follow in future newsletters.

Before writing on the articles of this issue, let me take the opportunity to introduce Jennifer Westaway as an associate editor of the EVL first. Jennifer is a lawyer and she works at Curtin University of Technology in Perth, Western Australia. She holds a PhD and has an interest in, researches and publishes in international law aspects of energy and value. Jennifer, welcome on board!

In this second issue of the journal, Mehmet Baha Karan writes on the outcomes of the 2nd Multinational Energy and Value Issues conference. The first conference brought about a special on energy and value issues in Frontiers in Finance and Economics (FFE). I am grateful that the publisher of FFE and the authors of the special allow us to have the abstracts of the articles in this issue of the EVL. Lastly, Timur Gok, based on his keynote address at the last CEVI conference in Istanbul in 2009, has written most insightfully and incisively on the implications of the worldwide financial crisis on developments in the energy markets.

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HACETTEPE UNIVERSITY

Second Multinational Energy and Value Conference

July 2-5, 2009 Istanbul, Turkey
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Energy and Value Letter

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The objective of the Second Multinational Energy and Value Conference was to bring together academics and practitioners from all over the world with a focus on timely valuation issues in the energy sector. The intention of organizing of this conference emerged from the fact that the importance of building international contacts and cooperation concerning the aspects of energy finance and economics has been steadily growing in the setting of a crisis which is characterized by extremely volatile prices of petrol, sharp falls in asset prices and hardship in providing an access to sufficient external funds for energy for energy financing.

Papers dealing with developed as well as with developing countries were presented in the conference. Furthermore, selected papers presented in the conference are currently under review to be published in the following peer-reviewed international journals: “Frontiers in Finance and Economics” and “Energy and Value Letter”. The conference has also been successful in attracting various sponsorships, including Central Bank of Turkey, British Petroleum, BOTAŞ Petroleum Pipeline Cooperation, Güneş Consulting and Gas&Power magazine.

The first day of the conference was allocated for the academic sessions whereas the second day was dedicated to the transmission of experiences by public and private entities. The key-note speaker of the first day was Prof.Timur Gok of Northern Illinois University, USA and Prof. Gok has explained the implications of the latest financial crisis on the energy markets. The second day of the conference was honored by the rector of the Hacettepe University and various authorities of the state ministries. Particularly, the closing speech on the Turkish electricity exchange by the Turkish Electricity Transmission Company has shed light on the current issues in the energy market of Turkey.

Social lunches, dinners and the boat trip on Istanbul Bosphorus didn’t only create very good atmosphere for the conference participants to develop the social network among them, but also stimulated the initial efforts to establish the “Center for Energy and Value (CEVI)” that had been planned as an institutional body of the Energy and Value network.

Finally, the Second Multinational Energy and Value Issues Conference in Istanbul has been successful in improving the international academic collaboration in the energy finance and economics area, which commenced with the first Energy and Value Issues Conference in Amsterdam in 2007. Specifically, the conference achieved to provide a robust networking bond among academia, public & private entities and associations in the energy market.

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ABSTRACTS FFE-SPECIAL ON ENERGY AND VALUE ISSUES

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The first conference on energy and value issues was held in Amsterdam, in June 2007. Next, three of the papers presented were selected for an energy and value special in Frontiers in Finance and Economics (http://www.ffe.esc-lille.com). The editor-in-chief of this journal agreed to have the abstracts of these articles published in the Energy and Value Letter. The contact authors of these articles have provided the abstracts that follow below.

Jens Lundgren (Umeå University, Sweden) assesses the effect of deregulation in the Swedish power market on consumer welfare. Hans Andeweg (E.D.Mij, The Netherlands), André Dorsman and Kees van Montfort (both Nyenrode University and VU University, The Netherlands) develop a strategy that exploits energy price differences between the Netherlands and Germany. Finally, Wassim Benhassine (Université Paris 1, France) deals with the restructuring of the European energy market through mergers and acquisitions.

The articles in the special issue of Frontiers in Finance and Economics deal with the deregulation, liberalization and integration of European energy markets at three levels. Lundgren's paper relates to a country (macro) level. Andeweg et al. deal with industry developments (meso level) and Benhassine investigates individual firms (micro level). Taken together, the three articles exemplify the rich diversity of energy and value issues that can be studied by academics.

Literature

Andeweg, H., A.B. Dorsman and K. van Montfort, 2009. Electricity traffic over the barriers of networks: the case Germany-the Netherlands, *Frontiers in Finance and Economics*, Volume 6 No. 2, 2009 (forthcoming).

Benhassine, W., 2009. The restructuring of the European energy market through M&As – an application of the model of economic dominance, *Frontiers in Finance and Economics*, Volume 6 No. 2, 2009 (forthcoming).

Lundgren, J., 2009. Consumer welfare in the deregulated Swedish power market, *Frontiers in Finance and Economics*, Volume 6 No. 2, 2009 (forthcoming).

Consumer Welfare in the Deregulated Swedish Electricity Market

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Abstract
The deregulation of the Swedish electricity market in 1996 affected both the market design and the pricing of electricity. Since 1996, the electricity price faced by consumers has increased dramatically. Due to the high electricity price and large company profits, a debate about the success of the deregulation has emerged. As such, the aim of this paper is to investigate whether or not the deregulation of the Swedish electricity market has improved consumers' welfare. The theoretical framework is an equivalent variation method and the analysis is performed using monthly data for the period January 1996 to January 2007. The results indicate that deregulation has kept the power price (excluding taxes) down and increased consumer welfare in Sweden.

Electricity Traffic over the barriers of networks: The case of Germany and the Netherlands

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Abstract
Since the electricity market was liberalized at the end of the last century, the authorities no longer fix prices, and there is now a variable price determined by the market. Every system has its own price-forming process. However, these systems are not completely isolated. It is possible to have a restricted measure of electricity traffic between the systems. This article describes a value-creating trade strategy on the basis of the prices of electricity in The Netherlands and Germany, making use of the restricted electricity traffic between the two countries, providing empirical evidence on exploitable pricing inefficiencies in the electricity markets and potential trading strategies based thereupon. This research has not been conducted before and will provide a better understanding of the interaction between separate electricity markets.

Restructuring the European energy market through M&As – An Application of the Model of Economic Dominance

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Abstract
In 1998, the European Commission decided to deregulate the national electricity sector with the objective of creating a single energy market. This deregulation involved an important increase in M&As (Mergers & Acquisitions), leading to a large reorganization of the European electricity industry. Using the theory of economic dominance developed by R. Lantner in 1974 - a theory inspired by the graph theory - this article aims at gaining an insight into the M&A strategies of electricity firms in Europe between 1998 and 2003, and the way in which these strategies affected the industry at the European level. We found that European electricity firms increasingly used strategies of M&A to strengthen their economic dominance.

The Financial Crisis: A New World Order and Some Implications for Energy Markets

Timur Gok
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Keynote Address
Second Multinational Energy and Value Conference, Istanbul, July 2, 2009

Abstract. *The financial crisis left the world economy in tatters and led many to question the economic, social and political order that had prevailed since the 1980s. I explore the origins of the financial crisis in the collapse of the U.S. housing market, the ensuing turmoil in financial markets, and the role of poor corporate governance mechanisms, misaligned incentives, misguided regulations and policies, failed gatekeepers and lax risk management practices against the backdrop of the "great moderation" and global imbalances. I end with a brief discussion on the impact of the financial crisis on energy markets.*

In this address, first I will explore the origins of the financial crisis that has gripped the world economy and then I will discuss some of the implications of the crisis for the future of market economies in general and energy markets in particular. However, before I begin, some caveats are in order. First, I will offer an American perspective. This, I hope, is not a limitation because the lessons learned are not peculiar to the U.S., but have global implications. Secondly, the crisis is still unfolding and this is not a definitive narrative, but one that still is in progress. The Nobel laureate physicist and chemist Ernest Rutherford had characterized science as "either physics or stamp collecting." What I will cover today is not physics, but neither is it stamp collecting. We have (possibly too many) ideas regarding what happened. However, given the debates still continuing regarding the causes and the resolution of the Great Depression, no doubt it will take us years to sort through the causes of what we now refer to as the Great Recession.

So, let me start at the beginning with a brief (and modern) history of homeownership in the U.S.

Evolution of Homeownership in the U.S.

When we view the history of homeownership in the U.S., some clear patterns emerge:[1] Prior to the Great Depression, homeownership was constrained (at about the 48 percent level) by limited mortgage products. The typical mortgage contract had a short maturity (ten-years); a high loan-to-value ratio (fifty percent); and interest only payments followed by a balloon payment at expiration. All that changed with the introduction of the Federal Housing Authority[2] (FHA) and other reforms in the 1930s. By the mid-60s, the homeownership rate had risen to about 64 percent. Researchers attribute all but about ten percentage points of that increase to innovations in mortgage products.

Between 1994 and 2005 we see another significant increase in the U.S. homeownership rate from about 65 percent to roughly 69 percent. Some researchers have attributed nearly a quarter of that increase to changes in the population structure (an increase in households of age less than 35) and the rest to non-demographic factors including the introduction of new mortgage products (the combo loan; expansion in subprime lending) as well as a reduction in the cost of providing mortgage services and the introduction and growth of secondary markets for trading mortgage products.

After the early 1990s, the pattern of the rising homeownership rate and declining interest and savings rates is quite clear. What was the mechanism that allowed the transformation of

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[1] The discussion here primarily draws from M. Chambers, C. Garriga and D.E. Schlagenhauf, "Accounting for Changes in the Homeownership Rate," Federal Reserve Bank of Atlanta, Working Paper 2007-21, September 2007.

[2] The FHA provided insurance against mortgage defaults for lenders. These years also witnessed the introduction of Federal Home Loan Banks that provided liquidity to savings and loans; new loan products; and the Federal Deposit Insurance Corporation and the Federal Savings and Loan Insurance Corporation.

low interest rates and low savings rates into high homeownership rates? The short answer is “disintermediation” or “the substitution of more efficient public capital markets for less efficient, higher cost, financial intermediaries in the funding of debt instruments”.

This is the system that led to the housing bubble that peaked in 2006. The financial crisis resulted when the housing bubble burst. (As an aside, the housing bubble was not unique to the U.S., but also was experienced in other countries such as Ireland, Spain and the U.K.)

The Seeds of Trouble

I *suggested* disintermediation (or securitization) as the mechanism that transformed low interest rates and low savings rates into high homeownership rates. The *actual* mechanism involved securitization and credit and liquidity “enhancements” provided by the banking system against a backdrop of global imbalances,[3] deregulation, higher leverage, and opportunistic agents at all levels including CEOs, investment bankers designing and selling (and often retaining on their firms’ balance sheets) ever more complex products, ready-to-please rating agencies, and mortgage brokers. Also participating were wishful investors as well as legislators and policy-makers swept up in the euphoria of markets. Then, there was the prevalent belief that markets can do no wrong, that is, market fundamentalism.

Even though many agents contributed in myriad ways to the crisis, I think it still is possible to identify a protagonist. That was Alan Greenspan, the former chairman of the U.S. Federal Reserve Board of Governors, and the tragic hero of the story. Alan Greenspan contributed to the crisis in two fundamental ways: by providing excessive liquidity that fed the housing bubble after the dot-com bubble burst and his market fundamentalism—his belief that markets can do no wrong.

Alan Greenspan was not the only proponent of market fundamentalism. He simply was the most prominent and influential spokesperson and most powerful advocate of market fundamentalism at the height of the era of deregulation when the financial sector acquired tremendous wealth and influence. In fact, Philippon and Reshef[4] show that relative financial wages decline and rise with the tightening and loosening of regulations. It so happens that the era of rising fortunes in the financial sector also was the era of rising debt.

The Great Unraveling

How did the entire edifice unravel?

Mortgage rates began rising in the summer of 2005, which led to the initial weakness in the housing market and house prices started declining in 2006. Loan quality problems appeared by late 2006 and early 2007. These were followed by tightening of credit standards on mortgages, particularly on newer and riskier products. As a result, lenders cut back and housing activity faltered again in Spring 2007 and delinquencies and foreclosures began to rise.

When the liquidity bubble popped, year-over-year net credit to the non-financial sector fell to $500 billion in 2009 from $2.2 trillion in 2006. Not surprisingly, this was accompanied by the severe decline in worldwide industrial output and world stock markets. Unlike the Great Depression, central banks reacted forcefully to these declines.

(Morally) Hazardous Terrain

As I pointed out earlier, there are many factors behind a collapse of such vast magnitude. These include:

- The originate-to-distribute (OTD) model (namely, securitization that we identified earlier) and the accompanying misaligned incentives;
- Fallacy of ever-increasing house prices;
- Poor risk management;
- Product complexity, lack of transparency and over-reliance on rating agencies; and
- Failure of corporate governance and regulatory mechanisms.

[3] See D. Gros, “Global imbalances and the accumulation of risk,” voxeu.org, June 17, 2009.

[4] T. Philippon and A. Reshef, “Wages and Human Capital in the U.S. Financial Industry: 1909-2006,” Working Paper, December 2008.

Although I see Greenspan as the chief advocate of a faulty system, what ultimately led to the crisis is the failure of regulators, policymakers and corporate governance mechanisms.

However, I also should point to other factors that contributed to the bubble and its ultimate demise. Analysts and researches have brought up the following, which I will mention only in passing:

- The Community Reinvestment Act (1977+);
- The Tax Reform Act (1986) and (1997);
- The Financial Services Modernization Act (1999) (Gramm-Leach-Bliley);
- The Commodity Futures Modernization Act (2000); and
- The Bankruptcy Abuse Prevention and Consumer Protection Act (2005).

To this list I can add the SEC's decision in 2004 to change the net capital rules that limited the amount of debt the brokerage units of investment banks could take on.[5] As a result, billions of dollars held in reserves would flow up to parent investment banks, allowing them to increase their leverage. For instance, at Bear Stearns, leverage rose to 33 to 1.

Now, I will briefly return to corporate governance. Over two centuries ago Adam Smith had most eloquently identified the problem with the corporate form of organization:

"The directors of [joint-stock] companies, however, being the managers rather of other people's money than of their own, it cannot well be expected that they should watch over it with the same anxious vigilance with which the partners in a private copartnery frequently watch over their own."

Adam Smith, *The Wealth of Nations*

Adam Smith's insight apparently was lost on Alan Greenspan, who was shocked by what happened, but not on Chuck Prince, the former CEO of Citigroup, who was willing to dance as long as the music was playing, or on those running Merrill Lynch. Quite phenomenally, in the span of a year-and-a-half Merrill Lynch lost about a quarter of the profits it had made in its 36 years as a listed company.

In the Wake of the Crisis

What are some of the issues in the wake of the crisis? I briefly will consider the following:
- Regulatory and policy responses;
- The shape of economic recovery; and
- Some implications for energy markets.

In the wake of the crisis, in some ways we face a new order, but perhaps not as new an order as some of us had hoped for.

Yes, government is now part of the solution and "Risikobegrenzungsgesetz" (risk limitation laws) now capture our mood and "macroprudential risk awareness" has gained a prominent role. The "alphabet soup" of regulations captures the proposed regulatory framework in the U.S. under the umbrella of the Financial Services Oversight Council.

However, the regulatory framework proposed by Treasury Secretary Timothy Geithner and by Lawrence Summers, chief of the National Economic Council, does not confront the core problems that brought us to where we are today in the first place. For instance, we still face banks that are "too big to fail"—TBTF is also too big (and still too powerful) and, apparently, "too big to break apart." We also still face the problem that global banks live globally, die locally. An all too powerful financial sector played a prominent role in bringing us where we are today and we are not able to confront that fundamental fact. The Fed gets more power and the rating agencies remain intact. High leverage seems here to stay.

These are timid reforms that bring to mind Sir Winston Churchill's famous observation during World War II: "In the long run, Americans will always do the right thing — after exploring all other alternatives."

The Shape of the Recovery

Finally, I will offer some thoughts on the shape of the economic recovery and its impli-

[5] S. Labaton, "Agency's '04 Rule Let Banks Pile Up New Debt," *The New York Times*, October 3, 2008.

cations for energy markets. Analysts have suggested W-L-U-V-shaped recoveries. Gillian Tett from the *Financial Times* has suggested a "bank-shaped" recovery (the symbol for "bank" in the Pitman system of shorthand, captures the economic outlook quite nicely: it arcs down, and swings back half-way where it remains flat).

The Market for Oil

If we agree on a "bank-shaped" recovery and weak economic fundamentals ("yellow weeds," rather than "green shoots"), we could agree on moderate oil prices through the period of recovery. In fact, the IEA is estimating that "global oil consumption will fall this year at the fastest rate since 1981." That should "restrain" oil price increases. However, other factors should lead us to question such an inference. Those factors include the speed of recovery in emerging markets (especially China) and inflationary expectations shaped largely by expansionary monetary and fiscal policies, as well as the willingness and ability of the U.S. to finance its deficits (consumer savings as well as federal budget deficits) under the existing currency regime (a "strong" dollar policy where the dollar maintains its status as a reserve currency). Higher U.S. inflation (oil, after all, is an inflation hedge) and a weaker dollar (which, I believe, is inevitable in the long-run), will contribute to higher oil prices denominated in dollars.

Yet another factor is oil supply. The downside of low oil prices is that, as a result, oil fields are taken out of production and exploration is reduced. If and when demand for oil revives, it will be difficult to increase oil production. Thus, it appears that a supply crunch may more than offset the impact of lower demand and exacerbate the impact of a decline in the value of the dollar on the price of oil. In fact, some (who also happen to support "peak oil" theory) are arguing that the next oil price shock may only be three to six months away. In the long-run, fundamentals are pointing toward higher oil prices. What about oil prices in the short-run? The outlook in the short-run is much harder to assess. As analysts at Raymond James have stated, "Short term, oil prices could go either direction." That is an honest assessment, but not a terribly helpful one.

Oil Prices: Market Fundamentals and Speculation

This brings us to the question of why oil prices rose dramatically in late 2007 and the first half of 2008. James Hamilton from the University of California San Diego presents a strong case that oil prices, including the dramatic rise to an all-time high of $145 per barrel in July 2008, were driven by fundamentals, as opposed to speculation.[6] His conclusion is based on a reasonable assumption regarding the price elasticity of demand for oil and the failure of the supply of oil to increase. His analysis also allows him to reasonably explain the subsequent drop in the price of oil (by arguing that price elasticity of demand for oil increased over time). Nevertheless, it is important to keep in mind other factors that arguably contributed to the spike in the price of oil over a short period in late 2007 and the first half of 2008. According to Hilary Till, these incidental factors include, among others, China's increased demand for diesel imports ahead of the Beijing Olympics, the U.S. Department of Energy's purchases of light sweet crude for the Strategic Petroleum Reserve, and the declining value of the dollar.[7]

A Warning Sign

Hamilton makes another important observation on the consequences of oil shocks: oil was a factor that contributed to 10 out of the 11 post-war U.S. recessions, the 11th being the recession that began in the fourth quarter of 2007. He observes that the dramatic rise in the price of oil was a factor that turned the slowdown that was driven by the housing sector into a recession. That is a lesson that we must bear in mind as we contemplate the future of energy prices, especially when it is quite likely that oil prices will spike sooner rather than later.

[6] J.D. Hamilton, "Causes and Consequences of the Oil Shock of 2007-08," NBER Working Paper 15002, May 2009.
[7] H. Till, "The oil markets: Let the data speak for itself," EDHEC, November 2008.